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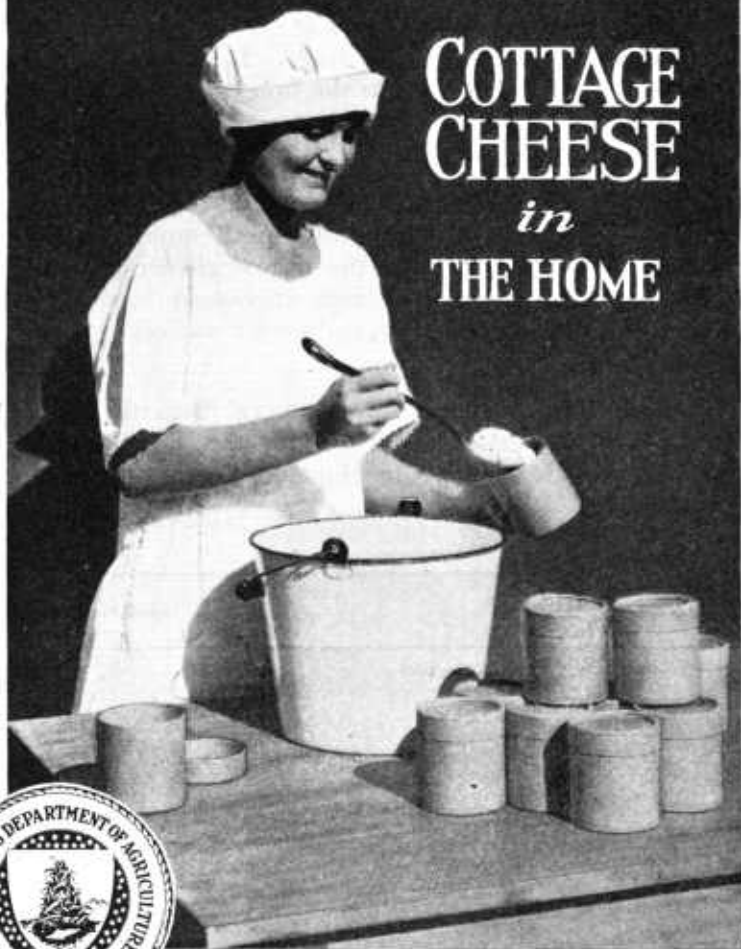
FARMERS' BULLETIN No. 1451

MAKING AND USING

COTTAGE  
CHEESE

*in*

THE HOME



**C**OTTAGE CHEESE is a highly nutritious and palatable product and is a means of utilizing skim milk to excellent advantage. It can be manufactured on the farm and in the home with but little labor and expense.

Directions given in this bulletin for manufacturing cottage cheese are suitable for making it for use in the home or for marketing on a small scale. Recipes are also given for the use of cheese on the table in both the cooked and uncooked forms as well as its use in the preparation of various appetizing dishes.

This bulletin supersedes Farmers' Bulletin 850, How to Make Cottage Cheese on the Farm, and Office of the Secretary Circular 109, Cottage Cheese Dishes.

# MAKING AND USING COTTAGE CHEESE IN THE HOME

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## A DESIRABLE FOOD EASILY PREPARED

**COTTAGE CHEESE**, a highly palatable and nutritious product, is one of the few varieties of cheese which can be manufactured on a small scale. From an economic standpoint, skim milk should be utilized as a human food rather than as an animal food. In cottage cheese is found a convenient and economical means of using skim milk as human food.

The haphazard methods used in the making of this product, together with the lack of simple and easily available directions, probably are responsible for the small quantities made and consumed in the home. Uncertainty of results and defects in the finished product also have been causes for discouragement to the beginner. It is hoped, however, that by following the directions given in this bulletin a better and more uniform product may be obtained.

The making of cottage cheese in small quantities for home use is a very simple process and ordinary household equipment will suffice. But if it is desired to market the product and to insure good, uniform quality it will be necessary to follow somewhat more elaborate methods. Details of manufacture sometimes must be modified according to conditions, and proficiency will be gained by experience.

## QUALITY AND ITS REQUISITES

Cottage cheese is judged by its flavor and texture. A high-quality cheese should have a clean, mild, acid flavor and a smooth texture, free from lumps, and uniform or homogeneous throughout. The undesirable flavors commonly found are described as unclean, tasteless, too acid, and sometimes even bitter. Flavor can be controlled by the use of clean, sweet skim milk and a good starter, but texture depends largely upon careful manipulation during the process of making. Good clean skim milk, clean utensils, and careful attention to details are essential to good quality in the product.

## GOOD SKIM MILK NECESSARY

The first consideration in the production of good cottage cheese is the quality of the milk itself. Milk which is dirty or has undergone any abnormal fermentation is undesirable. The fresher the milk the more satisfactory it is for cheesemaking, as then it is possible to direct and control the souring. It is absolutely necessary to give the milk proper attention, both at the time of its production and in its subsequent handling. The temperature at which it is kept from the time of production until it is made into cheese determines in large measure the quality of the cheese. For best results milk should be kept cool, at 50° F., if possible, until it is to be made into cheese.

## EQUIPMENT FOR MAKING COTTAGE CHEESE

Little equipment is needed for making cottage cheese, and for the most part it may be found in any home. When the cheese is made in large quantities a small outlay for equipment is warranted as a matter of convenience and satisfaction. In most homes, however, satisfactory substitutes may be found for some of the utensils mentioned here.

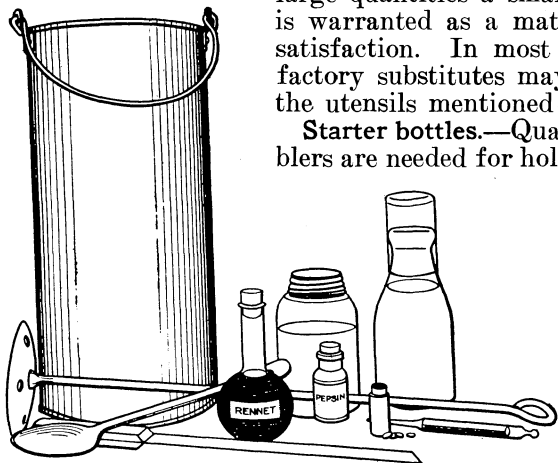


FIG. 1.—Equipment used in first stages of making cottage cheese

**Starter bottles.**—Quart milk bottles and tumblers are needed for holding the starter. Quart fruit jars will serve the purpose very well.

**Cans or pails.**—A shotgun can which may vary in size and material is very convenient; usually it is straight sided, 8 inches in diameter, 20 inches high, and holds about 4 gallons of milk. If such a can is not

available, an ordinary 10-quart milk pail will be satisfactory.

**Milk agitator.**—A stirrer of the kind shown in Figure 1 is desirable for getting a uniform distribution of the starter and rennet prior to setting and for stirring the curd, but for making small quantities of cheese a spoon is entirely satisfactory.

**Floating dairy thermometer.**—The use of a reliable and accurate thermometer is absolutely necessary to obtain uniformity in results from day to day. Because of the danger of breaking, it should be kept in a case when not in use.

**Rennet tablets.**—Either commercial liquid rennet or junket tablets are desirable when cottage cheese is to be made quickly. Rennet always should be kept cold and in a dark place.

**Draining racks.**—An ordinary fruit-draining rack is very useful for small quantities of cheese. A colander also will answer the purpose. When larger quantities are made a special wire-covered rack will be found very convenient. Such a rack (fig. 2) consists

of a rectangular frame, 20 by 52 inches and 6 inches high, upon the bottom of which is tacked one-half inch mesh woven wire. The rack should be made of hardwood and dovetailed at the corners. If it is placed slightly inclined upon a table, the whey is directed to a common point and collected in a jar or pail by the use of strips nailed to the bottom of the frame. The materials required for making the rack are two boards  $\frac{7}{8}$  by 6 by 52 inches, two boards  $\frac{7}{8}$  by 6 by 26 inches, and woven wire 26 by 52 inches.

Another kind of rack is rectangular, 13 inches wide, 36 inches long, and 10 inches deep. The corner posts extend  $1\frac{1}{2}$  inches beyond the strips and top and bottom, with the top rounded, so that a ring may fit over them. The bottom slats fit loosely into notches and are removable for washing. The materials required are 4 corner posts  $1\frac{1}{2}$  by  $1\frac{1}{2}$  inches, 9 strips 1 by  $\frac{3}{8}$  by 36 inches, and 6 strips 1 by  $\frac{3}{8}$  by  $12\frac{1}{4}$  inches, notched to receive bottom slats, all made of pine. A cloth is fastened upon each frame and the contents of one can poured into each cloth.

**Draining cloths.**—When the cheese is made without rennet, common cheese-cloth is most satisfactory, but for cheese made with rennet, unbleached cotton sheeting is recommended. The quantity depends upon the size of the draining rack, enough being required to supply a single thickness, with an allowance for hems. All draining cloths should be hemmed.

**Packages.**—Round, paraffined, sanitary, single-service paper containers, or glass jars with paper caps, are desirable for marketing the cheese.

#### MAKING SMALL QUANTITIES FOR HOME USE

One gallon of skim milk will make about  $1\frac{1}{2}$  pounds of cheese. If the milk is sweet it should be placed in a pan and allowed to remain in a clean, warm place at a temperature of about  $75^{\circ}$  F. until it clabbers. The clabbered milk should have a clean, sour, and pleasant flavor. Ordinarily this will take about 30 hours, but when it is desirable to hasten the process a small quantity of well-flavored sour milk may be mixed with the sweet milk.

As soon as the milk has thickened or firmly clabbered it should be cut into pieces 2 inches square, after which the curd should be stirred thoroughly with a spoon.

The next step is to heat the curd. Heating makes the whey separate readily, and aids in giving the cheese a firm texture. Place the pan of broken curd in a vessel of hot water so as to raise the temperature to  $100^{\circ}$  F. Cook at that temperature for about 30 minutes, during which time stir gently with a spoon for 1 minute at 5-minute intervals.

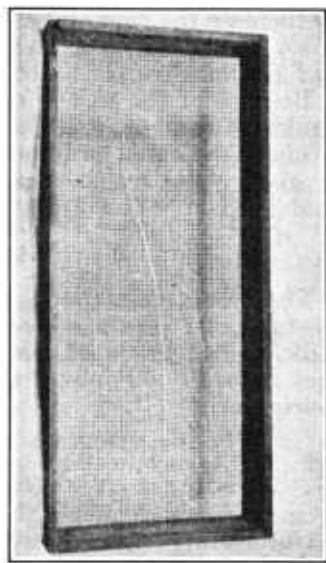


FIG. 2. — Wire-covered draining rack

At the conclusion of the heating, pour the curd and whey into a small cheesecloth bag (a clean salt bag will do nicely) or lay it upon a cloth and fold over the cloth to form a bag; then hang it on a fruit-drainer rack or elsewhere to drain. Draining may be hastened by laying the bag between two pie plates or clean boards and placing a weight on top. Sometimes the curd is poured into a colander or a strainer over which a piece of cheesecloth has been laid. After 5 or 10 minutes, work the curd toward the center of the colander with a spoon. Raising and lowering the ends of the cloth helps to make the whey drain faster. To complete the draining tie the ends of the bag together and hang it up. Since there is some danger that the curd will become too dry, draining should stop when the whey ceases to flow in a steady stream.

The curd is then emptied from the bag and worked with a spoon or a butter paddle until it becomes fine in grain, smooth, and of the consistency of mashed potatoes. Sour or sweet cream may be added to increase the smoothness and palatability and improve the flavor. Then the cheese is salted according to taste, about 1 teaspoonful to 1 pound of curd.

Because of the ease with which the cheese can be made it is desirable to make it often so that it may be eaten fresh. If the cheese is not to be eaten promptly it should be stored in an earthenware or glass vessel rather than in one of tin or wood, and if kept in a cold place it will not spoil for several days.

#### THE USE OF STARTERS

The first step in the making of cottage cheese is to sour or ripen the milk. If care has been used in the production and handling of milk, a good grade of cheese may be made by allowing the milk to sour naturally. Some of the dangers and disadvantages of natural souring are:

1. Slow coagulation or curdling.
2. Gassy and undesirable fermentations, causing loss of curd in whey.
3. Bitter and other undesirable flavors.
4. Lack of uniformity in the cheese.

Uncertainty of results and lack of uniformity in the cheese, however, have caused many to resort to a more definite means of controlling fermentation or souring by the use of starters. Starters aid and hasten acid fermentation and tend to suppress and eliminate undesirable fermentation. A home-made starter is a quantity of sour milk in which desirable acid-forming bacteria have grown until the milk contains a large number of them. When mixed with fresh milk these particular bacteria are given a start in the fresh milk over any other bacteria which might gain access.

#### COMMERCIAL STARTERS

When cottage cheese is to be produced in large quantities it is advisable to use a commercial starter, obtainable from a reliable starter company or through a dairy-supply house. The small package of starter, which may be either liquid or dried, is added to a pint of pasteurized milk and the milk cooled, covered, and set away at 75° F. to sour. This is called a "mother starter." After curdling or coagulation, a teaspoonful of the mother starter is

added to a quart of pasteurized skim milk, which, when coagulated, is used to ripen the milk for cheesemaking. In pasteurizing milk for starters, it is heated to 175° F. and held at that temperature for 30 minutes, after which it is cooled to 75° F. before the starter is added.

HOMEMADE STARTERS

Homemade starters are prepared as follows:

1. Clean thoroughly several pint fruit jars or wide-mouthed bottles, together with tops or tumblers for covering them and boil for five minutes (fig. 3). After boiling, keep the jars or bottles covered to prevent the entrance of bacteria.

2. Select several pint samples of fresh milk, put into the jars or bottles, cool to 75° F., cover and keep at that temperature until curdling occurs.

3. The curdling or coagulation should take place in about 30 hours. An ideal curd should be firm, smooth, marblelike, free from holes or gas bubbles, and showing little separation of the whey. To be a good starter the curd should have a clean, sharp, sour or acid flavor.

4. Select the sample that most closely meets these conditions and propagate it. This is done as follows:

a. Shortly before using, sterilize a quart jar or bottle and a teaspoon according to the method described in paragraph 1.

b. Fill the jar or bottle with fresh skim milk and pasteurize by heating to 175° F. and keeping at that temperature for 30 minutes.

c. Cool to 75° F. and add a teaspoonful of the curdled milk or starter selected as best, and set away to curdle.

d. When a starter with desirable qualities has been found, propagate it from day to day.

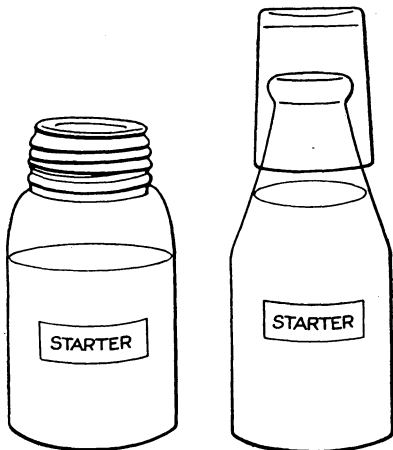


FIG. 3.—Bottles of starter.

PASTEURIZATION

While in small-scale operations the pasteurization of milk for cheese may not always be practicable, it permits a better control of the fermentations, increases the yield of cheese, and renders the product safe from disease-producing organisms. If milk is pasteurized just before being used for cheese-making it is absolutely necessary to use a vigorous starter for ripening. Otherwise, great difficulty is found in draining the curd, and as a result the cheese will probably be spoiled.

Skim milk is pasteurized for making cottage cheese by heating it in a pail, can, or vat to a temperature of 145° F. and holding it at that temperature for 30 minutes. The milk then is cooled quickly to 75° F., when it is ready for adding the starter.

MAKING CHEESE ON A LARGE SCALE

To make cottage cheese in considerable quantities and of good, uniform quality, it is desirable to follow a more exact method than that described for making small quantities for home use.



## SETTING

For natural souring without starter, fresh skim milk is placed in a clean pail or a shotgun can, covered, warmed to 75° F., and allowed to stand at that temperature until curdled. The temperature can be controlled by keeping the pail or can of milk in a tub, sink, or other vessel filled with water at the same temperature.

When starter is used it is stirred into skim milk which has been warmed to 75° F. (fig. 4). The vessel of milk is then covered and set away at the same temperature to curdle. The quantity of starter used varies from 1 to 5 per cent; a pint for 3 to 4 gallons of milk usually gives good results. By the use of a large quantity of starter it is possible to ripen the milk and complete the making of the cheese in one day. Probably it is more convenient, however, to set the milk



FIG. 4.—Stirring in starter and taking temperature

with starter at night, in which case the milk should be firmly clabbered by morning. For obtaining a desirable curd that is firm and not easily broken into fine particles during heating, 75° F. seems to be the best temperature. When the skim milk has coagulated into a firm, solid curd which gives a sharply defined break as the finger is inserted, with whey collecting at the break, the curd is ready for cutting.

## CUTTING, HEATING, AND STIRRING

The curd is cut crosswise into 2-inch squares, with a long-bladed knife. It is then heated quickly to 100° F. and maintained at that temperature for about 30 minutes. During the entire heating process the curd is stirred with a spoon or a cream agitator every four or five minutes. The object of these operations is to remove the whey from the curd and to bring the product into a

concentrated form. The texture of the cheese is regulated in a large measure by the manner of cutting, heating, and stirring the curd. Prolonged and vigorous stirring is undesirable, since it causes a fine-grained curd which is slow in draining and has excessive curd losses in the whey. Heating at too high a temperature results in a tough, dry curd.

## DRAINING

After heating, the mixture is poured upon cheesecloth, which is fastened over a pail or a specially constructed rack, in order to separate the curd from the whey. (See fig. 5.) The curd is allowed to drain undisturbed for 15 or 20 minutes, because if handled during that period it will tend to become mushy, a condition which renders the removal of the whey very difficult. Later, every few

minutes, the sides of the cloth should be raised and lowered several times (as shown in fig 5), which hastens draining. Draining should continue until very little whey separates upon standing, at which time the curd is rather soft and smooth. It is then ready for salting.

#### SALTING

The curd is then placed in a pan or pail and salt is added and mixed uniformly into the curd with a butter ladle or a spoon. The usual rate of salting is 2 heaping tablespoonfuls to  $3\frac{1}{3}$  gallons of milk, or about  $2\frac{1}{2}$  ounces to 10 pounds of curd, although there is some difference of opinion as to the quantity of salt needed. In case a scale is lacking it is possible to approximate the salt when it is

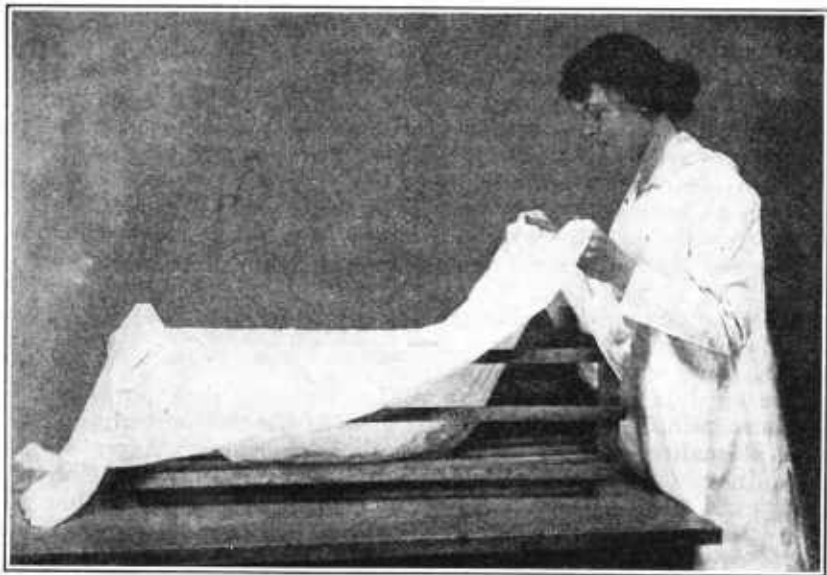


FIG. 5.—Raising and lowering draining cloth to hasten draining

known that a level tablespoonful of salt equals two-thirds of an ounce. Salt is added to the cheese to increase its palatability and to a certain extent to preserve it.

#### MAKING THE CHEESE WITH RENNET

Several advantages are found in making cottage cheese with rennet, as follows:

1. A finer-textured and more uniform cheese results.
2. Making requires less time and attention.
3. Losses of curd in the whey are reduced.

Rennet is a substance which causes milk to coagulate; it may be obtained either as commercial liquid rennet or as junket tablets. The former may be purchased from dairy-supply houses, while the latter may be obtained from grocers and druggists.

If commercial liquid rennet is used for making cottage cheese, about 3 drops should be added to each 10 pints or pounds of milk, or 10 drops to 30 pounds of milk. The rennet, after being measured, is diluted about 40 times with cold water (a half cupful is satisfactory) before it is added to the milk. For measuring rennet a medicine dropper may be used with good results.

If liquid rennet can not be obtained, junket tablets may be used, one tablet having about the same strength as 1 cubic centimeter or 25 drops of the liquid. One tablet may be dissolved in 10 tablespoonful of cold water, then 1 tablespoonful of the mixture is sufficient for 10 pounds or pints of skim milk and 3 tablespoonfuls for 30 pounds of milk. Junket tablets are not always of the same strength, so it may be necessary to experiment somewhat before the right quantity to add is obtained.

The milk is handled in identically the same manner as in the method already described with the exception that rennet is added to it just after the starter is put in and the mixture stirred vigorously. If no starter is used it is desirable to let the milk stand at 80° F. for five or six hours before adding the rennet. After the addition of rennet, the milk is allowed to stand until curdled.

When clear whey collects upon the surface of the curd in the can it is an indication that the curd is ready to be drained. At first it may not be possible to get the best results by this method, but after a few trials it should be possible to produce a fine, firm curd in from 12 to 15 hours.

If rennet or junket tablets are used, the curd should not be heated, as this will make the cheese too hard and tough. The draining may be done without preliminary cutting or stirring.

The curd is now poured upon the draining rack covered with cotton sheeting. Because of the fineness of the curd a draining cloth with a smaller mesh than cheesecloth is desirable. After a short preliminary drainage of about 20 minutes the ends of the cloth are unfastened and the diagonally opposite corners drawn together and tied. Moderate weights, about 25 pounds, are then placed upon the bag of curd to hasten the draining. (See fig. 6.) A pail filled with stones or water will serve for this purpose. There is danger that the cheese curd may be pressed too dry when rennet is used, so it is advisable to watch the curd closely during this period. The pressing should be continued until the curd has reached about the same consistency as described under the preceding method.

After draining, salt is added in the same way as for ordinary cottage cheese.

#### ADDING CREAM AND PEPPERS

A small quantity of sweet or sour cream added after salting, especially if the curd is a little dry, will improve greatly the quality and palatability of cottage cheese made by either process. Usually cream is added at the rate of half a pint to 10 pounds of curd.

Finely ground pimento peppers also add much to the appearance, taste, and attractiveness of the product, especially to the finer textured, rennet-made cheese. Peppers are added at the rate of 1 pound of peppers to 20 pounds of curd.

If the product is to be marketed the additional expense of cream or peppers probably is warranted.

YIELD OF CHEESE

The yield of cottage cheese depends upon the quality of the milk and the method of manufacture. Yields of 12 and 20 pounds of cheese per 100 pounds of skim milk represent the limits, whereas a normal yield of from 16 to 18 pounds produces best results.

MARKETING THE PRODUCT

Although often marketed in bulk and sold by the pound, cottage cheese may be marketed best in single-service containers holding from 10 to 12 ounces. This makes a neat and convenient package which commonly retails for about 10 cents. These cartons are made of wood pulp treated with paraffin. For interstate shipping it is necessary to put the net weight of these cheeses on the package, and it is desirable, for advertising purposes, to place on it the name and address of the maker. While the product may be molded into balls or prints and wrapped in paraffined paper, the carton is strongly recommended as a marketing receptacle for so perishable a product as cottage cheese. The carton makes a nearly air-tight package which retards deterioration of the cheese.

Recently a 12-ounce jar, provided with a paper cap, and fitting into a regular pint milk-bottle crate, has been successfully used in the marketing of cottage cheese. Such a container may be readily washed, sterilized, and used again. With such a receptacle there is little chance of imparting an objectionable taint to the cheese.

It is advisable to keep cottage cheese at a low temperature until consumed. Holding the product at room temperature for only 36 hours may cause it to become slightly "off flavor," whereas in a longer period the deterioration may be so marked as to render it unsuitable for consumption. Cheese from which the whey separates spoils quickly and is very undesirable. It is better to have the cheese a little too dry than too moist, for the former defect may be corrected easily by the addition of a little cream or milk by the consumer.

SUMMARY OF ORDINARY PROCESS OF MAKING COTTAGE CHEESE

The process of making cottage cheese without rennet, on the basis of 30 pounds or about 3½ gallons of milk, which will yield about 5¼ pounds of cheese, may be summarized as follows:

Obtain clean, fresh skim milk.

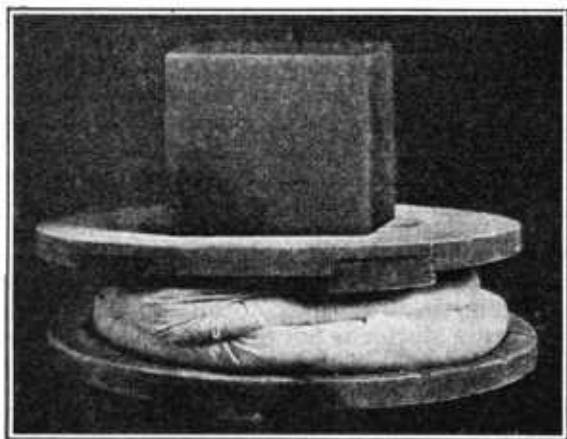


FIG. 6.—Boards and weight for pressing cheese.

If starter is not used, warm the milk to 75° F. and hold it at about that temperature until curdled.

If starter is used, add from 1 to 5 per cent, or about 1 pint of starter to 30 pounds of milk, stir, and set away at 75° F. to curdle.

If it is desired to pasteurize, heat milk to 145° F., hold at that temperature for 30 minutes, and cool to 75° F. If pasteurization is practiced, a starter must be used and should be added after pasteurization, as described.

Time for curdling when starter is used, from 12 to 15 hours (usually overnight).

When starter is not used the time for curdling will be about 30 hours.

Cut and stir, and then heat to 100° F. and hold for 30 minutes. Stir gently at intervals.

Pour upon cheesecloth and drain for 20 or 30 minutes.

Place in pail or pan and salt at the rate of 2½ ounces to 10 pounds of curd, or about 2 level tablespoonfuls for the cheese from 30 pounds of milk.

If desired, add sweet or sour cream at the rate of one-half pint to 10 pounds of curd, or about one-quarter pint of cream to the product from 30 pounds of milk.

#### SUMMARY OF RENNET PROCESS OF MAKING COTTAGE CHEESE

The following is an outline of the process with rennet on the basis of 30 pounds or 3½ gallons of milk, which will yield about 5¼ pounds of cheese:

Obtain clean, fresh skim milk.

When a starter is not used, after adding rennet, warm the milk to 75° F. and hold it at about that temperature until curdled.

If starter is to be used, add from 1 to 5 per cent, or about 1 pint of starter to 30 pounds of milk, and set away at 75° F. to curdle.

If it is desired to pasteurize, heat milk to 145° F., hold at that temperature for 30 minutes, and cool to 75° F. If pasteurization is practiced, a starter must be used and should be added as described.

Add rennet or junket tablets just before setting the milk away to curdle at 75° F., carefully stirring to insure a thorough distribution.

Add rennet at the rate of one-third cubic centimeter, or about 10 drops, diluted 40 times in cold water (half a cup of cold water is satisfactory) for each 30 pounds or 3½ gallons of milk.

Or, dissolve one junket tablet in a pint of cold water and use one-third of the mixture.

The time needed for curdling, when starter is used, is 12 to 15 hours (usually overnight); when starter is not used the time will be about 30 hours.

Pour upon cotton sheeting and drain for 20 to 30 minutes.

Tie the ends of the cloth together and press with weights) 20 to 25 pounds) until the curd has attained the desired consistency.

Salt at the rate of 2½ ounces to 10 pounds of curd. If desired, add sweet or sour cream at the rate of one-half pint of cream to each 10 pounds of curd, or one-quarter pint of cream to the product from 30 pounds of milk.

#### USES OF COTTAGE CHEESE

Cottage cheese is high in nutritive value, containing all the constituents of milk except the cream. Like milk, it is a source of protein, which is used to build and repair body tissue.

Physicians often find a milk diet useful in treating the sick. In many of these cases it may be possible to substitute cottage cheese, with added cream or butter if desired, for part or all of the milk. Thus a pleasing variety is introduced, and the bulk is lessened.

There is an abundance of skim milk, the material from which cottage cheese is made. It is used extensively for feeding animals; everyone knows that it is good for calves, pigs, and chickens, and that they make their best growth when it is abundant in the ration. The fact that skim milk can supply a rich and nourishing food for the family table has not been so fully recognized.

Cottage cheese is in fact a food that, served either alone or in combination, may form an important part of the diet. In salads, desserts, or cooked dishes, cottage cheese may be used to advantage. As a basis for the main dish of a meal it may often reduce expense, and appeal to the appetite as well as supply nourishment. Few people realize the diversity of its uses.

#### DELICIOUS COTTAGE-CHEESE DISHES

Those who are responsible for the planning and preparation of meals have found that cottage cheese combined with other foods can be made into many appetizing and attractive cooked and cold dishes. The cheese made by the rennet process, which is smooth and mildly acid, is more satisfactory for use in cooked dishes, while the cheese soured by the natural method is more suitable for cold dishes. To point out some of the many ways in which cottage cheese may be served, the suggestions below are given.

#### PLAIN COTTAGE CHEESE

Most people like plain uncooked cottage cheese. It is especially pleasing in summer, and when blended with rich cream and a little salt it is enjoyed by many. It is often eaten with sugar and cream. When cream is lacking, whole milk is used to moisten the cheese and sugar. Not only sweet cream, but sour cream or melted butter added to cottage cheese improves its flavor and increases the food value.

Cottage cheese, being mild in flavor, combines nicely with other things that give variety of flavor. Berries, peaches, or other fresh fruits may be used in this way; also canned fruits, raisins, cut dates, or other dried fruits, brown sugar, honey, jam or marmalade, or chopped nuts.

Broken nut meats, chopped pimentos, finely cut green peppers, diced cucumbers, or other crisp vegetables may also be mixed with the cheese. Horse-radish, onion juice, and parsley make a good combination.

Dry cheese should be seasoned well, packed into a buttered earthen or enamel dish, chilled, turned out on a platter, and served in slices. Ground sage makes a good seasoning.

Mix with the cheese a small quantity of finely ground left-over ham or corned beef and season the whole with mustard. Serve in slices or turn out the molded cheese on a border of lettuce leaves.

#### SALADS

Cottage cheese lends itself especially well to salads. If enough is used the salad may serve as the main dish of the meal. French, mayonnaise, or boiled dressings go well with cheese salad. The cheese may be formed into balls or slices; it may be molded in tiny cups or passed through a pastry tube. Foods that combine well with cottage cheese in salads are crisp, fresh vegetables; cooked or canned vegetables; fresh, dried, canned, or preserved fruits; nuts; olives; rice; potatoes. With the last two some highly flavored and bright garnish, like beets, pimentos, or green peppers, should be used; and celery, cucumbers, green peppers, crisp lettuce, or cabbage may be added to give succulence. Ground raw carrots and onions combine nicely with cottage cheese.

#### SANDWICH FILLINGS

Cottage cheese may be used as a sandwich filling. All kinds of bread lend themselves well to cottage-cheese sandwiches. The cheese may be combined with nuts, grated hard cheese, pimentos, horse-radish, chopped or sliced olives, whole or chopped nuts, sliced celery, chives, Spanish onions, raisins, dates, prunes softened by soaking, freshly crushed mint leaves, honey, jelly, or marmalade. These additions may be blended with the cheese or may be spread in a layer over it.

#### COTTAGE-CHEESE ROLL (UNCOOKED)

**Seasoned.**—Various loaves or rolls can be made by combining cottage cheese with cold cooked rice or with fresh bread crumbs, and seasoning with horse-radish, olives, chopped onions or onion juice, parsley, chopped celery, sage, pimentos, green peppers, grated hard cheese, or other desired seasoning. The flavor of onion, parsley, celery, or green pepper will blend more thoroughly with that of the cheese if these vegetables are cut finely and cooked for a few minutes in a little butter before being added to the roll. Chopped nuts, finely cut celery, or cubed cucumbers are pleasing additions. Left-overs of boiled ham, fried bacon, cold meats, salmon, tuna fish, or other fish may be used to add variety.

If desired the loaf may be rolled, just before serving, in sifted bread crumbs that have been slightly browned in the oven. These rolls are specially attractive if served on a bed of lettuce leaves, shredded lettuce, or grape leaves, and garnished with fresh or cooked vegetables that have been tossed in French dressing. Salad dressing is frequently served with these rolls.

**Sweet.**—Sweetened cheese rolls may be made for a hearty dessert. These may contain fresh, dried, or candied fruits and nuts, or they may be served with canned or preserved fruits as a garnish. Preserved ginger is particularly delicious served with such a cheese roll, as is also candied orange or grapefruit rind. The roll may be sprinkled with almond or macaroon dust, or with dry crumbs from stale cake.

COTTAGE CHEESE AND NUT LOAF

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| 2 cups cottage cheese.<br>1 cup chopped nuts.<br>1 cup cold leftover cereal, any kind.<br>1 cup dry bread crumbs.<br>2 tablespoons chopped onion, or $\frac{1}{2}$<br>teaspoon onion juice.<br>1 tablespoon fat. | Salt, pepper.<br>$\frac{1}{8}$ teaspoon or more of soda to neu-<br>tralize acid.<br>Sage, poultry seasoning, or mixed<br>herbs.<br>Worcestershire sauce, or kitchen<br>bouquet, if desired. |
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Mix all ingredients together thoroughly, form into a loaf, and bake in a buttered pan in a hot oven for 20 to 25 minutes, or till top and sides are well browned. Turn out on a hot platter. Serve with a brown or tomato sauce if desired. This loaf is particularly good made with peanuts. Substitute for the cup of chopped nuts in the rule above, 2 tablespoons of peanut butter and  $\frac{1}{2}$  cup of coarsely chopped nuts, and season with  $\frac{1}{2}$  teaspoon of ground sage or with 1 teaspoon of mixed poultry seasoning. Where walnuts are used, pimentos make a good garnish.

COTTAGE-CHEESE PATTIES

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| 1 cup cottage cheese.<br>1 cup dry bread crumbs; or $\frac{1}{2}$ cup<br>cold cooked rice, and $\frac{1}{2}$ cup<br>bread crumbs.<br>$\frac{1}{4}$ cup peanut butter, or 2 tablespoons<br>savory fat.<br>$\frac{1}{4}$ cup coarsely chopped peanut meats.<br>$\frac{1}{2}$ teaspoon powdered sage. | $\frac{1}{2}$ teaspoon powdered thyme.<br>1 tablespoon milk.<br>1 teaspoon salt.<br>$\frac{1}{4}$ teaspoon pepper.<br>$\frac{1}{3}$ teaspoon soda.<br>1 to 2 tablespoons finely chopped<br>onion. |
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The bread crumbs, if desired, may be made from left-over quick breads.

Cook the onion in the fat until tender but not brown. Dissolve the soda in the milk and work into the cheese. Mix all other dry ingredients thoroughly with the bread crumbs. Blend peanut butter and onion with the cheese, and mix the bread crumbs with them. Form into flat cakes, dust with bread crumbs, cracker crumbs, or corn meal, and fry a delicate brown in a little fat in a hot frying pan.

Other seasonings may be used in place of those described above. The quantity of liquid will vary in every case. The mixture should be very stiff, since the cheese tends to soften during the cooking.

To utilize left-over cereals, use 1 cupful of cooked rice, oatmeal, or corn-meal mush with  $\frac{3}{4}$  cupful of bread crumbs.

Dry corn meal or finely ground oatmeal may be used for stiffening the above mixture, but in such case it is better to form into a loaf and bake it in the oven about 25 minutes.

COTTAGE-CHEESE BALLS

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| $\frac{1}{2}$ cup thick white sauce, made from<br>$\frac{1}{2}$ cup milk, 2 tablespoons flour, 1<br>tablespoon fat, salt, and pepper.<br>2 cups cottage cheese. | 2 cups mashed potatoes.<br>1 egg, beaten.<br>Bread crumbs. |
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Make white sauce. Gradually beat cottage cheese into it. Add mashed potatoes, season, make into soft balls, roll in bread crumbs, then in beaten eggs, then in bread crumbs again. Fry in kettle of deep fat until a golden brown. These cheese balls are delicious served with tomato sauce.



## COTTAGE-CHEESE CAKE

1½ cups cottage cheese.	⅔ cup milk.
1 tablespoon butter.	1 tablespoon cornstarch.
½ teaspoon salt.	⅔ cup sugar.
¼ teaspoon vanilla.	2 eggs.

Blend the cheese, butter, salt, and vanilla until smooth. Mix the milk and cornstarch and bring to a boil, stirring to prevent lumping or sticking. Add the sugar to the cooked milk and cornstarch, and heat. Pour the hot milk mixture over the slightly beaten eggs, stirring thoroughly, and heat to a custard consistency. Add the cottage cheese mixture to the custard, and pour into a deep baking dish which has previously been lined with shortcake dough. Bake until crust is done and slightly browned.

## CRUST FOR COTTAGE-CHEESE CAKE

2⅔ cups flour.	1 teaspoon salt.
6 tablespoons fat (lard).	⅔ cup milk.
4 teaspoons baking powder.	2 tablespoons sugar.

Sift the flour, baking powder, salt, and sugar together. Work lard into flour, and add milk, forming into dough as for biscuits. Roll out crust about ¼ inch thick, and line the inside of baking dish.

## STUFFED DATES, FIGS, OR PRUNES

Season cottage cheese with salt and thick cream, and with chopped nuts if desired. Remove stones from dates or soaked prunes, and open figs, for stuffing. Fill cavities with seasoned cottage cheese and whole nut meats or candied fruits. This makes an excellent confection or dessert.

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